

METHOD AND APPARATUS FOR SYNCHRONIZING DATA TRANSFERAbstract of the Invention

The invention is a method and apparatus for ensuring synchronization for digital communication between a transmitting and a receiving device, particularly when the clock and/or frame synchronization is sourced from a different location than the transmit data. In accordance with the first aspect of the invention, the transmitting device employs a look ahead algorithm to begin transmitting data before actual receipt of the frame synchronization signal.

In accordance with a second aspect of the invention, at the initialization of a communications session between two particular devices, e.g., a controller and a target device, a mini test communication session is executed in which the transmitting device transmits a test pattern at the beginning of a frame. The receiving device then looks for receipt of that test pattern using sampling points assuming no delay skew. If it does not receive that test pattern, then it does the test again, except using sampling points that are delayed some predetermined delay period. The process continues, with the controller adding another predetermined delay period on top of the previous delay period until it detects receipt of the bit sequence of the known test pattern. At that point, it thereafter samples received data from that target device using the determined delay period.